CLAIMS

1. A nonvolatile memory comprising a pair of memory elements as a unit that can transit only from a first state to a second state that are different in electric characteristics by applying at least a voltage or a current,

wherein a memory cell is formed that stores 1-bit data by using two states that one memory element is in the first state and the other memory element is in the second state.

2. A nonvolatile memory comprising at least three memory elements as one unit that can transit only from a first state to a second state that are different in electric characteristics by applying at least a voltage or a current,

wherein a memory cell is formed that stores data by using only a state that a certain number of memory elements transit from the first state to the second state.

3. A nonvolatile memory comprising a pair of memory elements as a unit that can transit only from a first state to a second state that are different in electric characteristics by applying a voltage or a current,

wherein a memory cell is formed that stores 1-bit data by using two states that cannot be transited to each other by applying a voltage to the first memory element or the second memory element.

4. A nonvolatile memory comprising at least three memory elements as one unit that can transit only from a first state to a second state that are different in electric characteristics by applying at least a voltage or a current,

wherein a memory cell is formed that stores data by using only a state that cannot be transited to each other among combinations obtained in the unit.

5. A nonvolatile memory comprising a pair of memory elements as a unit that can transit only from a first state to a second state that are different from a threshold voltage by applying a voltage,

wherein a memory cell is formed that stores 1-bit data by using two states that one memory element is in the first state and the other memory element is in the second state.

6. A nonvolatile memory comprising at least three memory elements as one unit that can transit only from a first state to a second state that are different from a threshold voltage by applying a voltage,

wherein a memory cell is formed that stores data by using only a state that a certain number of the memory elements transit from the first state to the second state.

7. A nonvolatile memory comprising a pair of memory elements as a unit that can transit only from a first state to a second state that are different from a threshold voltage by applying a voltage,

wherein a memory cell is formed that stores 1-bit data by using two states that cannot be transited to each other by applying a voltage to the pair of memory elements among four states that can be obtained by the pair of memory elements.

8. A nonvolatile memory comprising at least three memory elements as one unit that can transit only from a first state to a second state that are different from a threshold voltage by applying a voltage,

wherein a memory cell is formed that stores data by using only a state that cannot be transited to each other among states that can be obtained in the unit.

9. A nonvolatile memory comprising a pair of memory elements as a unit that can transit only from a first state to a second state that are different from a resistance value by applying a current,

a memory cell is formed that stores 1-bit data by using two states that one memory element is in the first state and the other memory element is in the second state.

10. A nonvolatile memory comprising at least three memory elements as one

unit that can transit only from a first state to a second state that are different from a resistance value by applying a current,

wherein a memory cell is formed that stores data by using only a state that a certain number of the memory elements transit from the first state to the second state.

11. A nonvolatile memory comprising a pair of memory elements as a unit that can transit only from a first state to a second state that are different from a resistance value by applying a current,

wherein a memory cell is formed that stores 1-bit data by using two states that cannot be transited to each other by applying a current to the pair of memory elements among four states that can be obtained by the pair of memory elements.

12. A nonvolatile memory comprising at least three memory elements as one unit that can transit only from a first state to a second state that are different from a resistance value by applying a current,

wherein a memory cell is formed that stores data by using only a state that cannot be transited to each other among combinations obtained in the unit.

13. The nonvolatile memory according to any one of claims 1 to 12,

wherein a unit for outputting a signal for determining if the memory cell stores data or not is provided.

14. The nonvolatile memory according to claim 5 or 8,

wherein the memory element has a charge accumulating layer comprising a polycrystalline silicon film, a microcrystalline silicon film, a metal film, a microcrystalline metal film, or a nitride film.

15. An IC card incorporated with the nonvolatile memory according to any one of claims 1 to 14.

16. An ID card incorporated with the nonvolatile memory according to any one of claims 1 to 14.

17. An ID tag incorporated with the nonvolatile memory according to any one of claims 1 to 14.